

# Welcome to the Inaugural Healthcare Mortgagee Advisory Council Conference 2018



October 25 – 26, 2018



# Navigating the Illusive Clean Site: Environmental Do's and Don'ts

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- Moderator: Angela Folkers, Chief Underwriter - Love Funding
- Panelist: Terry Bessette, Supervisory Appraiser, Program Environmental Specialist - ORCF
- Panelist: Sara Jensen, Housing Environmental Clearance Officer - HUD
- Panelist: Hannah Pearl, EP, CFM, NEPA Compliance Manager – D3G
- Panelist: Kyle Hoylman, Founder/Managing Partner - Protect Environmental

# Navigating Radon

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Panelist: Kyle Hoylman, Protect Environmental

**SURGEON GENERAL'S WARNING:  
Radon causes lung cancer.**



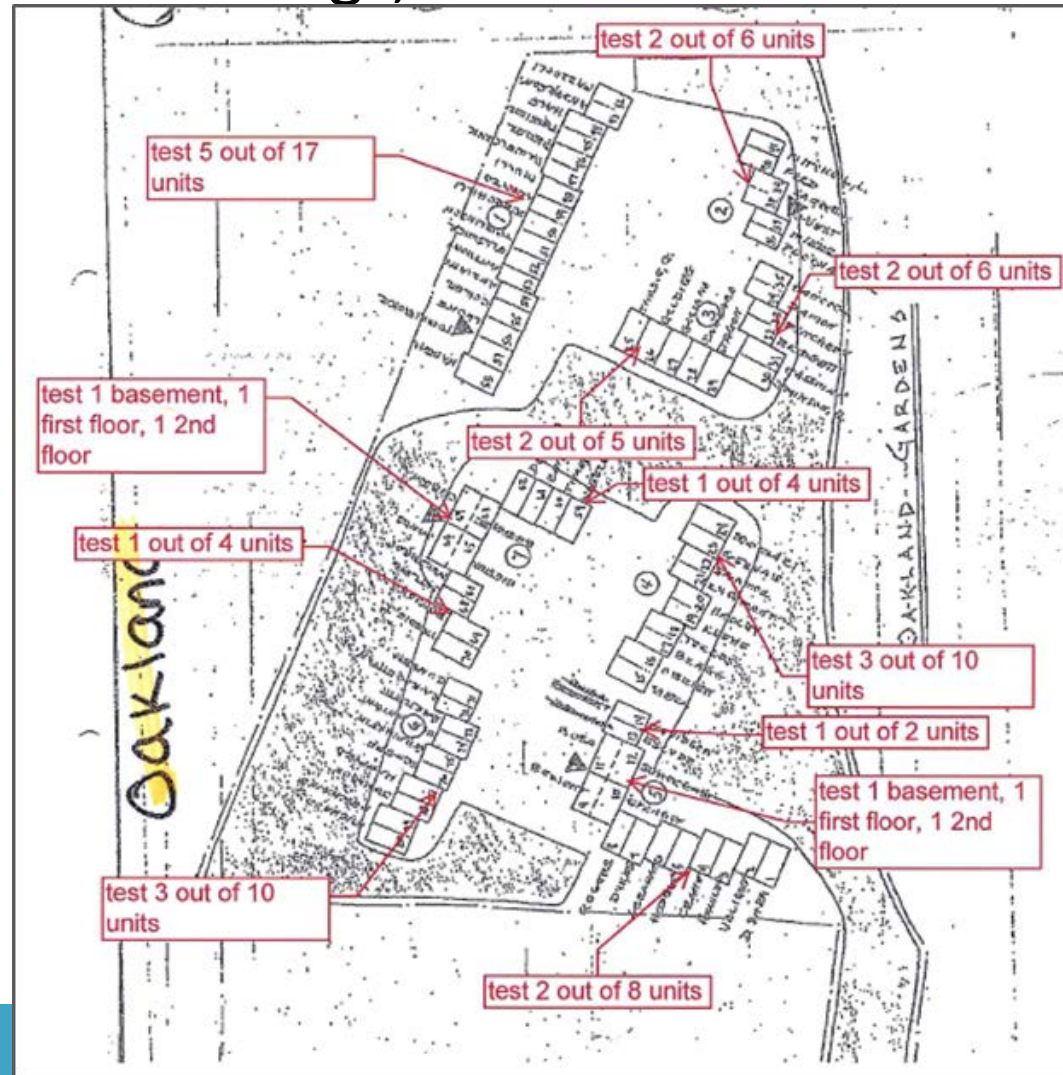
# Measurement Standard Comparison

	MALB-2014 (LEAN)	MAMF-2018 (MAP)
Minimum testing period	72 Hours	48 Hours
Initial testing strategy	Concentration	Concentration
Follow up testing strategy	Concentration + Exposure	Concentration
25% screening deviation - follow up requirement $\geq 4.0$ pCi/L	Yes	Yes
	100% Remaining GCU's	100% Repeat GCU's + 10% Upper Level
Zone 3 testing exemption	No	Yes
Post-mitigation testing strategy	Unit	Building



# Meriden, CT Example

## 7 Buildings, 80 Residential Units



## Meriden, CT Example

### 25 % Initial

- 1: 2/5 units > EPA action level
- 2: 1/2 units > EPA action level
- 3: 4/4 units > EPA action level
- 4: 0/3 units > EPA action level**
- 5: 0/7 units > EPA action level**
- 6: 1/3 units > EPA action level
- 7: 1/5 units > EPA action level

### 100% Follow Up

- 1: 13 units > EPA action level
- 2: 5 units > EPA action level
- 3: 8 units > EPA action level
- 4: 8 units > EPA action level**
- 5: 8 units > EPA action level**
- 6: 9 units > EPA action level
- 7: 3 units > EPA action level

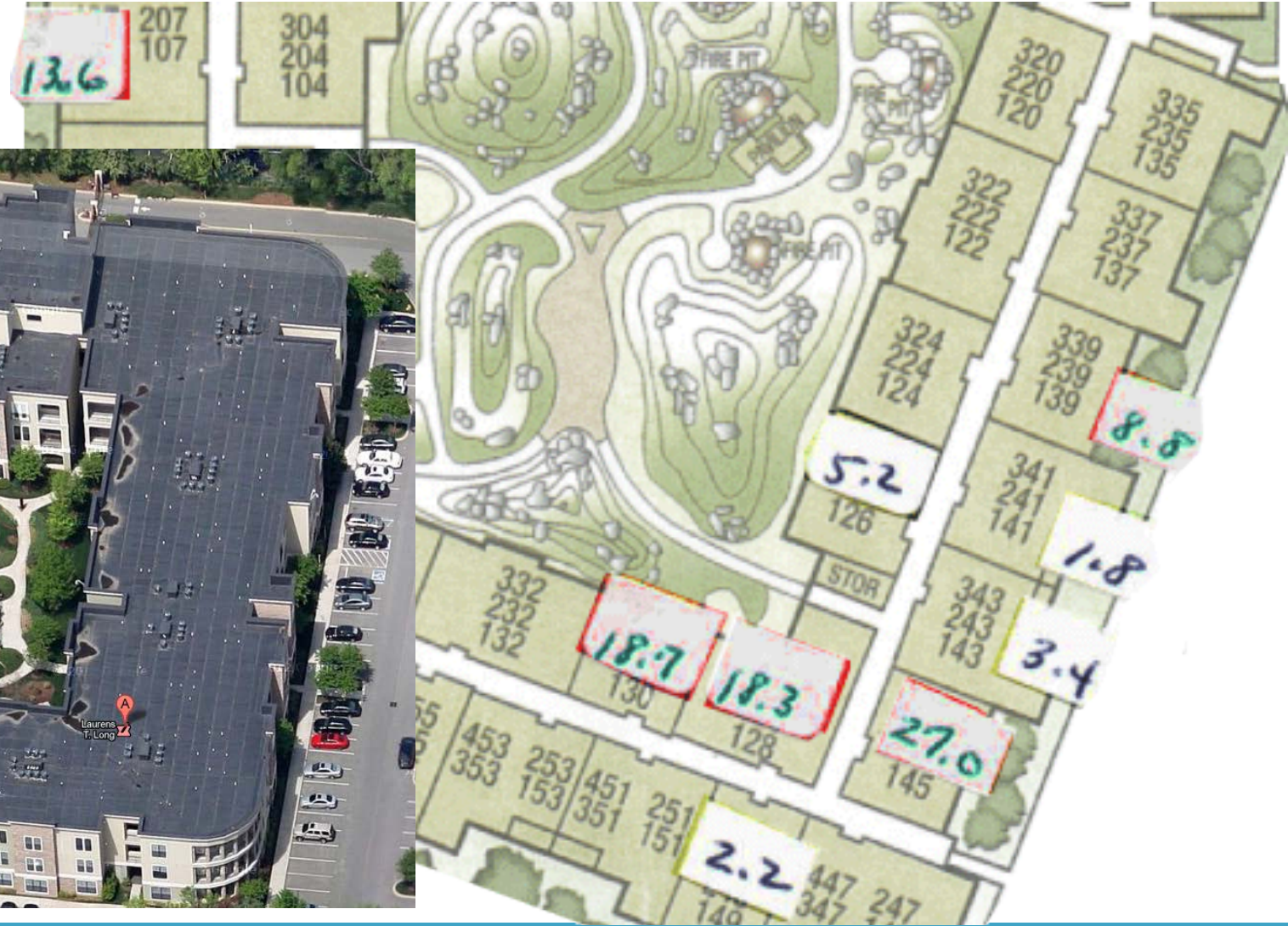
- 100% follow up assessment of the buildings identified 16 residential units in 2 buildings
- Total of 44 additional residential units identified through full site characterization

## Lexington, KY Example

- 10% screening of 1 unit in 18 buildings, total of 144 ground contact residential units (Freddie)
- 14 residential units in 14 buildings > EPA action level – policy requirement to mitigate 14 residential units
- 100% assessment of ground contact units conducted – 108 of 144 residential units > EPA action level (16 units greater than EPA respirator rate, none on initial screening list)
- Client chose to mitigate 108 residential units, Freddie required 14 residential units – liability consideration

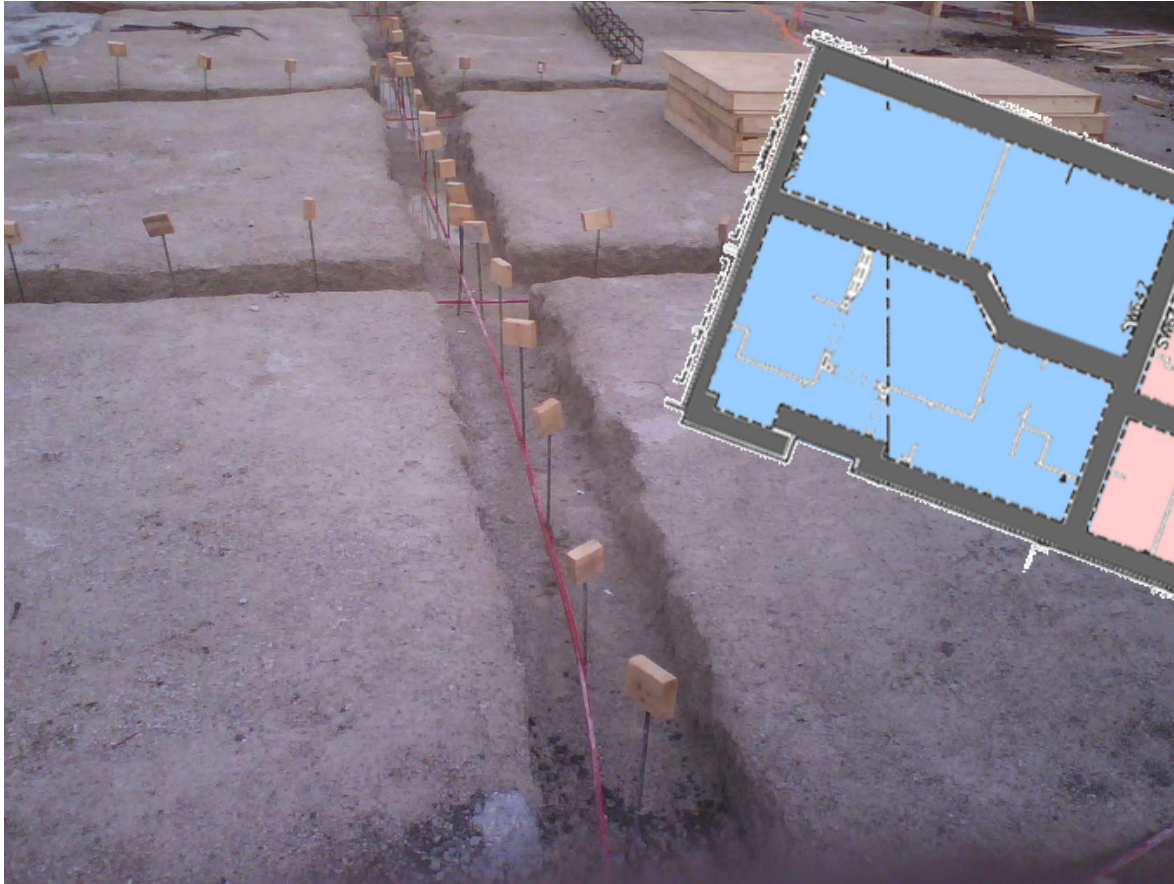


# Nashville, TN Example





# Nashville, TN Example

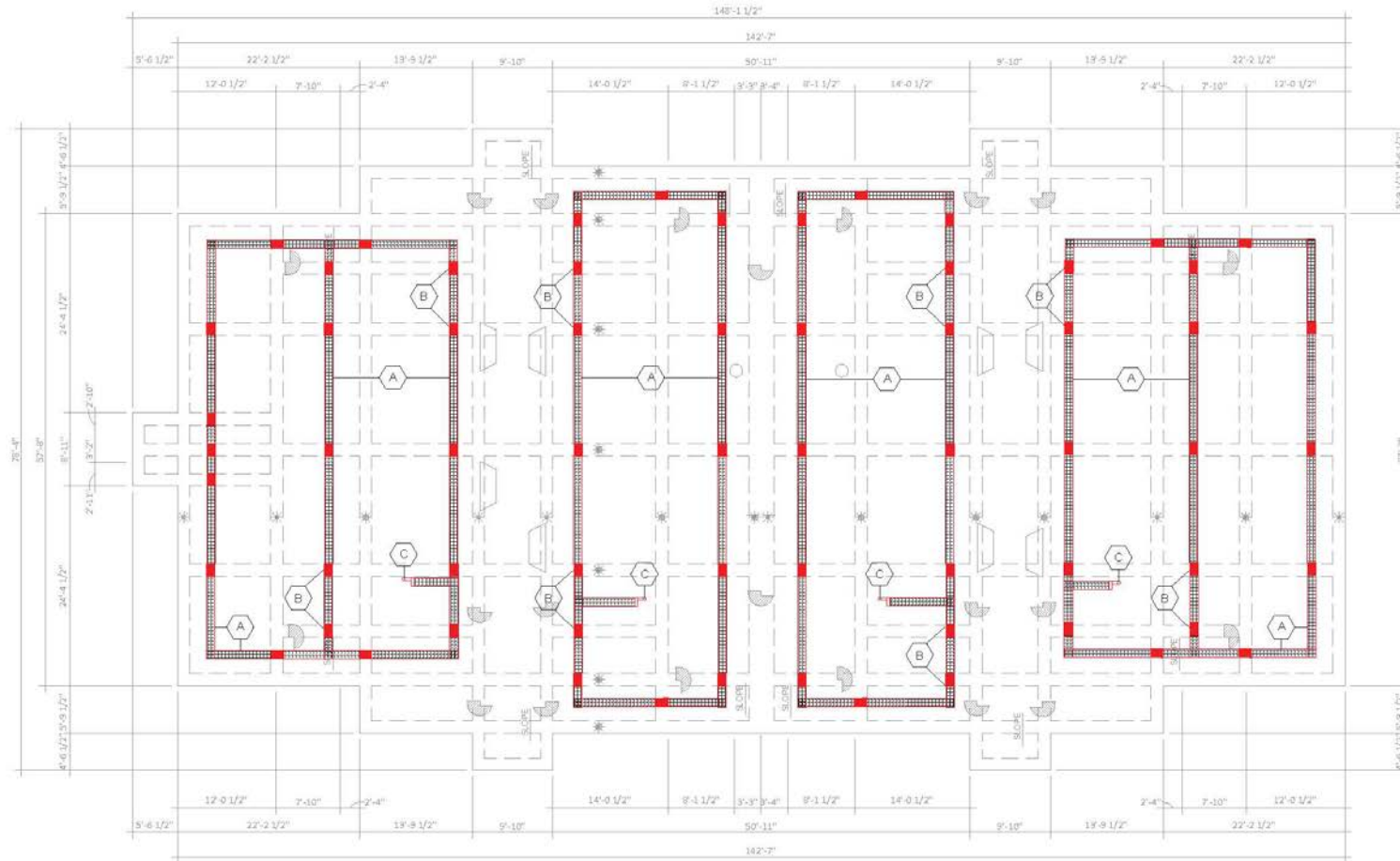


# New Construction Update

- Standards – AARST/ANSI CC-1000 (2018) and AARST/ANSI CCAH (2013)
- Soil gas control system required – all zones
- Performance testing required – AARST/ANSI CC-1000
- Post-construction testing required
- Activation of system required -  $\geq 4.0$  pCi/L
- OM+M program required
- Project oversight and certification – Radon Professional



# San Antonio, TX Example



**BUILDING TYPE 1 & 2 - FOUNDATION PLAN**

SCALE: 1/8"=1'-0"



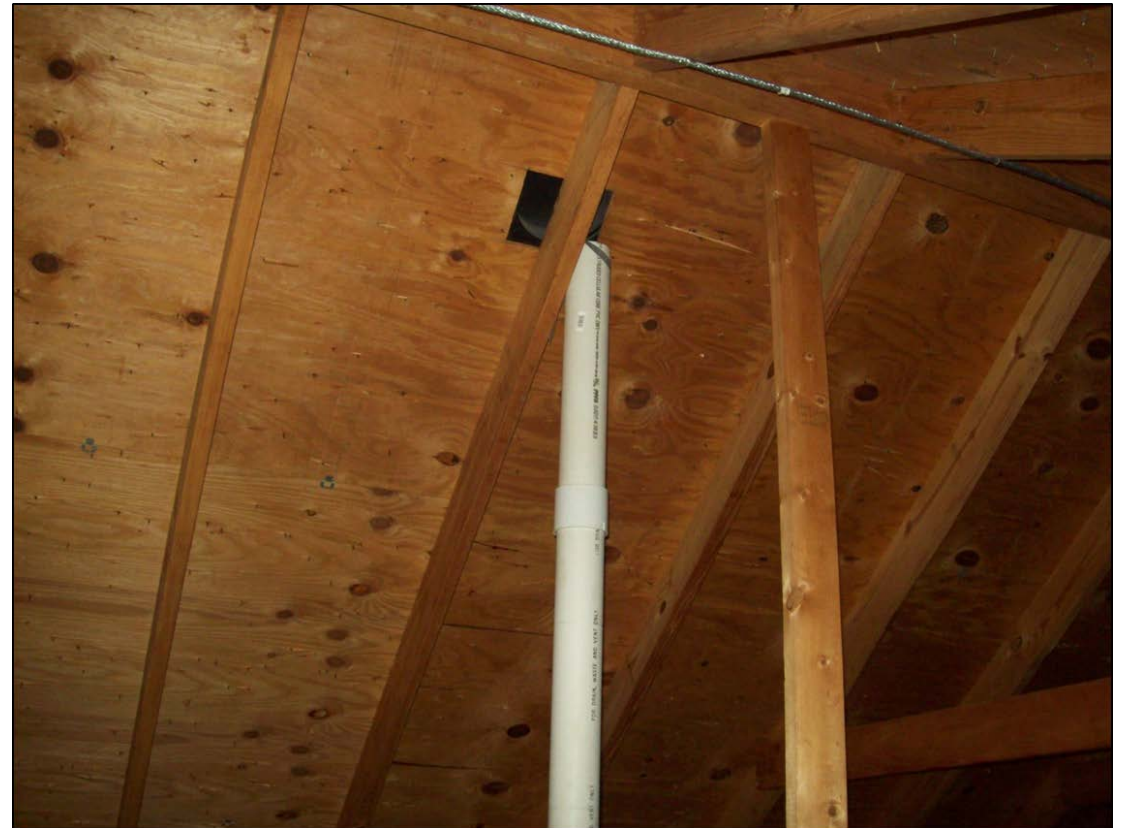
# Mitigation – Design Considerations

- Standard – AARST/ANSI RMS-LB (2018)
- Unit mitigation versus collateral mitigation
- Aesthetics – interior versus exterior system location
- Electric configuration – unit power versus house power
- Roofing configuration – shingle versus flat (warranty/bonding)
- Short-term cost of installation versus long-term cost of ownership





## Mitigation Gone Wrong



## Mitigation Gone Wrong



## Mitigation Gone Wrong





## Mitigation Gone Wrong



# Mitigation – Cost of Ownership Example

Installation Cost – 26 GCU $\geq$ 4.0 pCi/L	Contractor A	Contractor B
Pre-mitigation clearance testing – 9 units - 4 units removed from mitigation plan – Contractor B	\$0	\$1,435
Pilot testing / building characterization	\$0	\$6,000
Mitigation system installation - Per unit cost: \$1,285 – Contractor A, 26 Systems - Per unit cost: \$2,350 – Contractor B, 16 Systems	\$33,410	\$37,600
Post-mitigation clearance testing – 26 Units (LEAN)	\$1,500	\$2,025
OM+M program plan	\$0 (not included)	\$500
<b>Installation Cost Total</b>	<b>\$34,910</b>	<b>\$47,560</b>



# Mitigation – Cost of Ownership Example

OM+M – 26 GCU $\geq$ 4.0 pCi/L	Contractor A	Contractor B
2-Year Testing Cycle – Mitigation - \$2,000(+/-), 26 Units	\$34,000	\$34,000
5-Year Testing Cycle – Non-Mitigation - \$7,500 (+/-), 140 Units	\$45,000	\$45,000
5-Year Mitigation System Maintenance - \$550 (+/-) per system, routine/non-routine	\$85,800	\$52,800
1-Year Mitigation System Operation - \$168 (+/-) per system, electric consumption, air leakage	\$152,880	\$94,080
<b>OM+M Cost Estimate Total (35-Year Assumption)</b>	<b>\$317,680 (rec) \$238,680 (req)</b>	<b>\$225,880 (rec) \$146,880 (req)</b>

< 5-Years to return 100% of installation cost difference, \$92,000 (+/-) cost of ownership advantage



# Navigating the Environmental Process with HUD

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Panelist: Sara Jensen, HUD Housing Environmental Clearance Officer

Panelist: Terry Bessette, ORCF Supervisory Appraiser, Program Environmental Specialist



# Choice Limiting Actions

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- HUD must complete an Environmental Review before any site work can commence, including:
  - Construction
  - Demolition
  - Building modifications
  - Site clearing
  - Tree removal
  - Ground disturbance
- This applies to direct or indirect parties to the transaction (developer, seller, owner).



# Choice Limiting Actions

What <u>Can't</u> you Do Prior to Env Review?	What <u>Can</u> you Do Prior to Env Review?
Acquisition, Demolition, Construction	Develop plans and designs
Rehabilitation or Repair	Perform work necessary to support an application for permits
Lead or Asbestos Abatement	Conduct environmental studies, including wetland delineations, soil borings, site testing, etc.
Site Clearing or Tree Removal	Perform inspections and testing of properties
Ground Disturbance	Incur Housing pre-development costs that don't have a physical impact

Unsure about an action? Contact Lean Thinking.



# Timing

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- Lenders can contact HUD via Lean Thinking and request an early start on environmental factors where consultation is necessary in order to avoid processing delays. Examples include the 8-step process, consultation on Endangered Species, tribal letters and SHPO correspondence.
- Otherwise ORCF staff will start the environmental review when they receive an application.



Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		
31						

# Environmental Conditions on FIRM

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- The environmental review must be complete and signed off in HEROS before HUD issues a FIRM.
- The environmental review and FIRM can contain certain conditions, but only for issues that have already been reviewed and approved.
- All consultation must be complete, correspondence resolved, etc. before HUD can issue a FIRM.





# Conditions

Condition Approved	Condition Denied
<p><b>Historic Preservation:</b> Signed MOA with SHPO/ Tribe requires an archaeologist be present during excavation. The archaeologist should be selected and already have a contract in place.</p>	<p><b>Historic Preservation:</b> MOA will be developed or signed in the future. All consultation must be complete, correspondence with tribes resolved, etc. before HUD can complete an environmental review and issue a FIRM.</p>
<p><b>Toxic Hazards:</b> site remediation will take place during construction; remediation plan approved by the state.  HUD needs hard numbers on cost and an evaluation of worst case scenarios.</p>	<p><b>Toxic Hazards:</b> unapproved or incomplete remediation plans.  See 232 Handbook Chapter 7.3 for more information.</p>
<p><b>Wetland:</b> 8-step analysis requires Best Management Practices for soil erosion during construction. Condition must be in FIRM agreement and construction documents.</p>	<p><b>Wetland.</b> 8-step conducted as condition of the FIRM.  8-step is a decision-making process and must be complete prior to HUD issuing a FIRM.</p>

# ORCF Environmental Conditions

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## ➤ Environmental Conditions

- Listed in the Firm Commitment when applicable

### Three Examples

- Wetlands Restriction
- Underground Storage Tank
- Archaeological Site, Human Remains, or Cultural Resources of Tribal or Historic Interest



# ORCF Environmental Conditions

## ➤ Wetlands Restriction

- Applies when wetlands exist at the site
- Is in a rider to the Regulatory Agreement
- The restriction ends when the HUD-insured mortgage is terminated
- Advises the borrower that HUD must complete a review before work begins that might impact a wetland



# ORCF Environmental Conditions

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➤ **When wetlands exist at the site**

“The following statement is to appear in a rider to the Borrower Regulatory Agreement:



**WETLANDS RESTRICTION.** While any mortgage insured by HUD is in effect, Borrower shall not perform construction activities on the Mortgaged Property that impact any area that qualifies as a wetland by the U.S. Army Corps of Engineers 1989 delineation procedures or the U.S. Fish and Wildlife Service "Classification of Wetlands and Deepwater Habitats of the United States" without first obtaining the consent of HUD and any applicable federal, state, or local permits. Please note that this definition includes wetlands that are not defined as jurisdictional under Section 404 of the Clean Water Act and is to be interpreted consistent with 24 CFR Part 55.”

# ORCF Environmental Conditions

## ➤ Underground Storage Tank (UST)

“Prior to closing, the Mortgagor must provide a certification stating that the facility has adopted and implemented an Underground Storage Tank Operations and Maintenance plan. The owner must ensure that all applicable personnel are trained and familiar with the plan.”

### ***When does ORCF use the condition?***

- A UST exists on the property containing hazardous waste or petroleum products\*; also
- the tank is not regulated by the State; and
- after acceptable UST test results and an O&M plan prepared

\*Does not apply to propane USTs



# ORCF Environmental Conditions

## ➤ **Historic Preservation**

Projects with proposed ground disturbance



## **Archaeological Site, Human Remains, or Cultural Resources of Tribal or Historic Interest:**

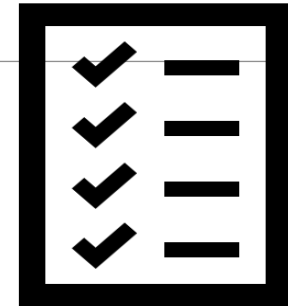
“If an archaeological site, human remains, or cultural resources of tribal interest are revealed during the project's construction, HUD must be notified.

HUD will contact responders to the Section 106 consultation, as applicable. If ground disturbance is to occur after closing, the closing package must contain a certification of this condition from the borrower.”

# ORCF Environmental Checklist

## ➤ Environmental Checklist for 232/223(f) projects

[https://www.hud.gov/sites/documents/223f\\_EnvChecklist.xlsx](https://www.hud.gov/sites/documents/223f_EnvChecklist.xlsx)



Project Name: _____ <a href="#">Handbook 4232.1 REV-1 - Environmental Chapter 7</a>																																								
1. Consideration of Repairs	Was the third-party environmental consultant informed of all repairs, improvements, alterations, site work and demolition prior to completing the environmental report? ___ Yes ___ No																																							
2. Airport Hazards (24 CFR Part 51 Subpart D)	Is the project located in a runway clear zone at a civil airport, or a clear zone or accident potential zone (APZ) at a military airfield*? ___ Yes ___ No <i>*This part applies to all military airfields and to civilian, commercial airports identified in the National Plan of Integrated Airport Systems prepared by the FAA. See: <a href="http://www.faa.gov/airports/planning_capacity/npias/reports/">http://www.faa.gov/airports/planning_capacity/npias/reports/</a></i> If yes, inform the borrower that the property is in a Runway Clear Zone, APZ or Clear Zone, and of what the implications of such a location are; e.g., safety, potential eminent domain acquisition, etc. Include the borrower's signed acknowledgement of the information in the application.																																							
3. Coastal Barrier Resources	Is the subject property located within a designated Coastal Barrier Resources System (CBRS) unit? ___ Yes ___ No State locator maps are available on the U.S. Fish & Wildlife Service website at: <a href="http://www.fws.gov/CBRA/Maps">www.fws.gov/CBRA/Maps</a> <i>The CBRS is a system of protected coastal areas that serve as barriers protecting the Atlantic, Gulf, and Great Lake coasts and Other Protected Areas (OPAs). A project that is located within a CBRS unit, or includes a facility (such as a water main) to a CBRS unit, is not eligible for mortgage insurance.</i>																																							
4. Coastal Zone Management	Projects which "directly affect" lands or water of a designated Coastal Management Zone must be carried out in a manner consistent with the approved state coastal zone management program. <table border="1" style="width: 100%;"> <tr> <td colspan="3">STATES WITH COASTAL MANAGEMENT ZONES:</td> </tr> <tr> <td>Alabama</td> <td>Alaska (*)</td> <td>American Samoa</td> </tr> <tr> <td>California</td> <td>Connecticut</td> <td>Delaware</td> </tr> <tr> <td>Florida</td> <td>Georgia</td> <td>Guam</td> </tr> <tr> <td>Hawaii</td> <td>Illinois</td> <td>Indiana</td> </tr> <tr> <td>Louisiana</td> <td>Maine</td> <td>Maryland</td> </tr> <tr> <td>Massachusetts</td> <td>Michigan</td> <td>Minnesota</td> </tr> <tr> <td>Mississippi</td> <td>New Hampshire</td> <td>New Jersey</td> </tr> <tr> <td>New York</td> <td>North Carolina</td> <td>Northern Mariana Islands</td> </tr> <tr> <td>Olao</td> <td>Oregon</td> <td>Pennsylvania</td> </tr> <tr> <td>Puerto Rico</td> <td>Rhode Island</td> <td>South Carolina</td> </tr> <tr> <td>Texas</td> <td>Virgin Islands</td> <td>Virginia</td> </tr> <tr> <td>Washington</td> <td>Wisconsin</td> <td></td> </tr> </table> <p>Does the project directly affect a designated Coastal Management Zone? ___ Yes ___ No <a href="#">Coastal Management Zone Map Tool</a> If the answer is yes, the project must be consistent with the state's coastal zone management program. Work with the state coastal commission to obtain a consistency determination and provide the information with the application. Coastal Zone Management information for states with designated coastal zones is available on the NOAA Office of Ocean and Coastal Resource Management website. <a href="#">HUD Coastal Zone Guidance</a></p>	STATES WITH COASTAL MANAGEMENT ZONES:			Alabama	Alaska (*)	American Samoa	California	Connecticut	Delaware	Florida	Georgia	Guam	Hawaii	Illinois	Indiana	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	New Hampshire	New Jersey	New York	North Carolina	Northern Mariana Islands	Olao	Oregon	Pennsylvania	Puerto Rico	Rhode Island	South Carolina	Texas	Virgin Islands	Virginia	Washington	Wisconsin	
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Louisiana	Maine	Maryland																																						
Massachusetts	Michigan	Minnesota																																						
Mississippi	New Hampshire	New Jersey																																						
New York	North Carolina	Northern Mariana Islands																																						
Olao	Oregon	Pennsylvania																																						
Puerto Rico	Rhode Island	South Carolina																																						
Texas	Virgin Islands	Virginia																																						
Washington	Wisconsin																																							
5. Endangered Species	Does the project involve any construction (e.g., a building addition) or site work (such as tree removal, site clearing/alterations)? ___ Yes ___ No If yes, obtain a list of protected species from the US FWS website. Include the information in the application and indicate whether or not there are endangered species or critical habitats in the project's area. <a href="#">Endangered Species - IPaC Tool</a>																																							
6. Floodplain Management (24 CFR Part 55)	FEMA Flood Insurance Rate Map (FIRM) Number: _____ FIRM Effective Date: _____ Flood Zone(s): _____																																							

- ❑ Twenty-Two Environmental Topics
- ❑ Links and Information

Located online in the Section 232 Documents  
[https://www.hud.gov/federal\\_housing\\_administration/healthcare\\_facilities/residential\\_care/underwriting/223f](https://www.hud.gov/federal_housing_administration/healthcare_facilities/residential_care/underwriting/223f)




# Preliminary and Effective **FLOOD MAPS**

Looking for a Flood Map? [?](#)

Enter an address, a place, or longitude/latitude coordinates:

Looking for more than just a current flood map?  
Visit [Search All Products](#) to access the full range of flood risk products for your community.



- **Floodplain Management (24 CFR Part 55)**

- When FEMA provides interim flood hazard data, such as Advisory Base Flood Elevations (ABFE) or preliminary maps and studies, HUD shall use the latest of these sources. (24 CFR Part 55.2(b)(1))
- *However, a base flood elevation from an interim or preliminary source cannot be used if it is lower than the current flood map*



# Preliminary and Effective **FLOOD MAPS**

**Effective** (current) Flood Insurance Rate Map (FIRM)  
Panel # 3604970379**F**



**Preliminary** Flood Insurance Rate Map (FIRM)  
Panel # 3604970379**G**



- 100-year floodplain
- 500-year floodplain

# Finding Preliminary Flood Maps

## FEMA Flood Map Service Center: Search By Address

Enter an address, place, or coordinates: ?

150 Beach 122 Street, Brooklyn, NY

Search



Whether you are in a high risk zone or not, you may need [flood insurance](#) because most homeowners insurance doesn't cover flood damage. If you live in an area with low or moderate flood risk, you are 5 times more likely to experience flood than a fire in your home over the next 30 years. For many, a National Flood Insurance Program's flood insurance policy could cost less than \$400 per year. Call your insurance agent today and protect what you've built.

Learn more about [steps you can take](#) to reduce the risk flood damage.

Click to search  
Preliminary Maps

Search Results—Products for **NEW YORK, CITY OF**

Effective FIRM

Show ALL Products »

The flood map for the selected area is number **3604970379F**, effective on **09/05/2007** ?



# Finding Preliminary Flood Maps

**Please Note:** Searching All Products by county displays all products for all communities within the county. You can refine your search results by specifying your specific jurisdiction location using the drop-down.

- Effective Products (578) ?
- Preliminary Products (122) ?**
  - Preliminary FIRM Panels (120)
  - Preliminary FIS Reports (1)
  - Preliminary FIRM Database (1)
- Pending Product (0) ?
- Historic Products (316) ?

120 Preliminary maps for the county

DL ALL

DL ALL

Pending Products are issued after Preliminary Products have been approved and will become Effective soon.








# Finding Preliminary Flood Maps

- A Preliminary or Pending map may have the same ID number as the effective map - except for the final letter.
  - 3604970379**F** = Effective
  - 3604970379**G** = Preliminary

Showing 101 to 120 of 120 entries

Previous 1 2




Product ID	Issue Date	Size	Download
3604970377G	01/30/2015	24MB	 DL
3604970378G	12/05/2013	4 MB	 DL
3604970379G	12/05/2013	3 MB	 DL
3604970381G	01/30/2015	26MB	 DL
3604970382G	01/30/2015	29MB	 DL

# Finding Preliminary Flood Maps

- When the list does not include the project's effective map number with a new final letter:
  - View the Preliminary **INDEX** Map. Index maps show the locations of all maps in the community.
    - Index Maps are at the top of the list and include "**IND**" in the Product ID.

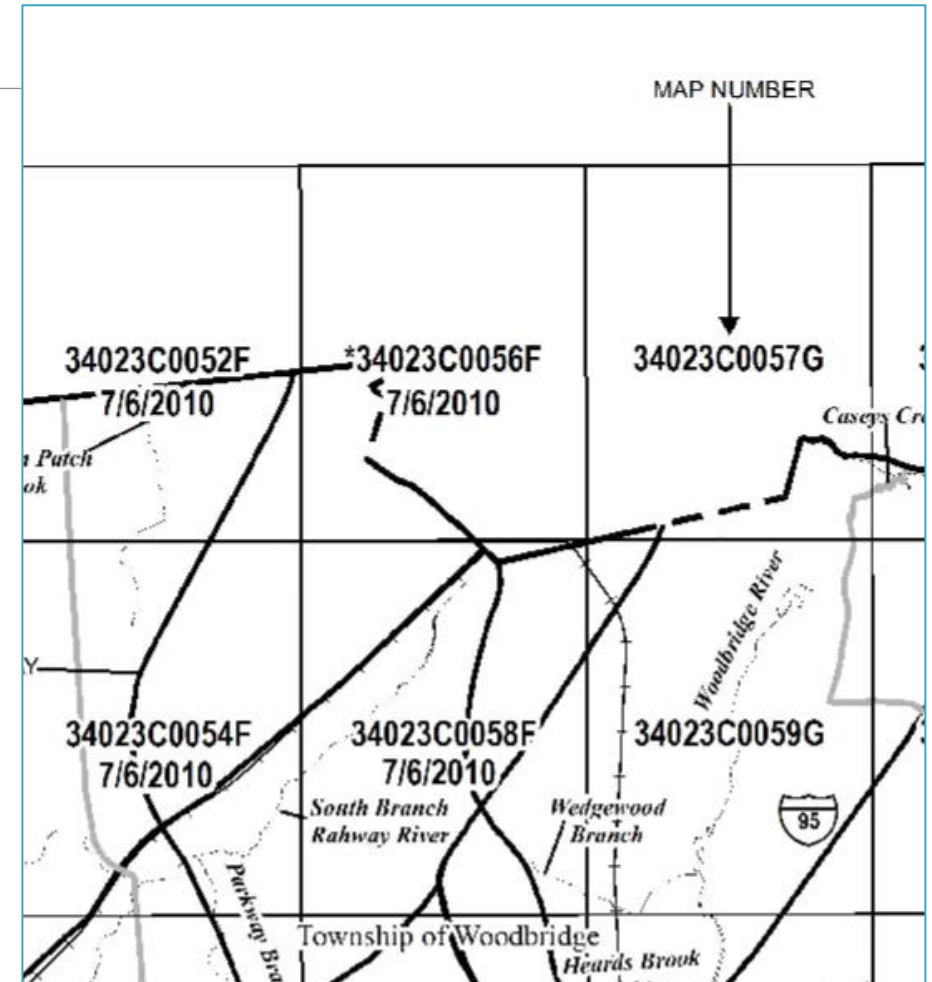
Showing 1 to 100 of 120 entries

Previous 1

Product ID	Issue Date	Size	Download
360497 <b>IND</b> 0B	12/05/2013	1 MB	 DL
3604970016G	12/05/2013	2 MB	 DL
3604970018G	12/05/2013	4 MB	 DL

# Finding Preliminary Flood Maps

- Locate the project on the Preliminary index map.
- A new map number represents a Preliminary map;
- If the project's **effective map number is shown**, a Preliminary map has not been issued.
- On the preliminary index to the right, the maps ending in “F” are the effective maps.  
(Preliminary maps not available in those areas)



# Navigating the 8-Step Process: FAQs and Tips for Success

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Panelist: Hannah L. Pearl, EP, CFM; Dominion Due Diligence Group (D3G)



# What is the 8-Step Process?

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- A series of discussions and analysis of project information to summarize HUD's decision-making process for determining whether or not a project may be allowed to qualify for HUD assistance when its development involves impacts to identified floodplain or wetland areas.
- The Process includes:
  - ✓ the publication of two (2) Legal Notices in the local newspaper to notify area residents, businesses, and municipal agencies about the proposed undertaking, each of which is followed by a public comment period (15-days and 7-days, respectively)
  - ✓ analysis and documentation regarding a project's potential impacts to identified floodplain and/or wetland areas
  - ✓ analysis of alternative properties, alternative designs, and the "No-Action" Alternative
  - ✓ analysis and documentation of avoidance, mitigation, and preservation methods undertaken to minimize impacts to regulated floodplain and/or wetland areas

**Only when HUD is satisfied that the proposed undertaking does not involve a significantly detrimental loss of environmentally sensitive resources and that all impacts have been minimized and mitigated to the greatest extent practicable, will a HUD-assisted project be allowed to proceed.**





# When is the 8-Step Process Required?

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The 8-Step Process is required for any HUD-assisted new construction or substantial rehabilitation projects which involve impacts, whether direct or indirect, to identified Special Flood Hazard Areas or Wetlands

**Inclusive of off-site impacts**



# When is the 8-Step Process Required?

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## Floodplains

- Proposed Activities Within Special Flood Hazard Areas: 100-Year Floodplain, Regulatory Floodway, Coastal High Hazard Areas
- Critical Action = LEAN: 8-Step Process is also required for HUD-assisted LEAN projects within the 500-Year Floodplain

## Wetlands

- Impacts to any wetland area, whether jurisdictional or non-jurisdictional
- HUD defines a wetland as those areas that are inundated with surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. The definition includes wetlands separated from their natural supply of water and constructed wetlands. **Please note that the US Army Corps of Engineers has a more restrictive definition of wetlands. A determination by the US Army Corps that there is no jurisdictional wetland on site is not sufficient documentation for HUD's purposes.**



# HUD MAP vs. HUD LEAN: Critical Actions and the 8-Step Process (Floodplains Only)

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**HUD MAP:** 8-Step Process required for Special Flood Hazard Area only

**HUD LEAN:** 8-Step Process required for Special Flood Hazard Area **and/or** 500-Year Floodplain

All “critical actions” as defined in 24 CFR 55.2(b)(3), must comply with the requirements of 24 CFR 55.20(e)(3) – “...All critical actions in the 500-year floodplain shall be designed and built at or above the 100-year floodplain (in the case of new construction) and modified to include:

1. Preparation of and participation in an early warning system;
2. An emergency evacuation and relocation plan
3. Identification of evacuation route(s) out of the 500-year floodplain; and
4. Identification marks of past or estimated flood levels on all structures.



# 8-Step Process vs. 5-Step Process

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## 8-Step Process

- New Construction
- Substantial Rehabilitation
- Building Addition
- Completed by Third-Party Consultants under the direction of HUD (all documentation must be reviewed and approved by HUD)

## 5-Step Process

- Refinance/Acquisitions located within a Special Flood Hazard Area and/or 500-Year Floodplain (for LEAN projects)
- Eliminates Public Notices (Steps 2 and 7) and discussion of Alternative Sites (Step 3)
- Usually completed solely by HUD during their environmental review of a project
- May include the completion of Elevation Certificates for any structures within the floodplain

**Whenever there is an on-site Special Flood Hazard Area (or 500-year floodplain for LEAN projects, either the 8-Step or 5-Step Process is always required, unless the project qualifies for an exemption under 24 CFR Part 55.12(c)**



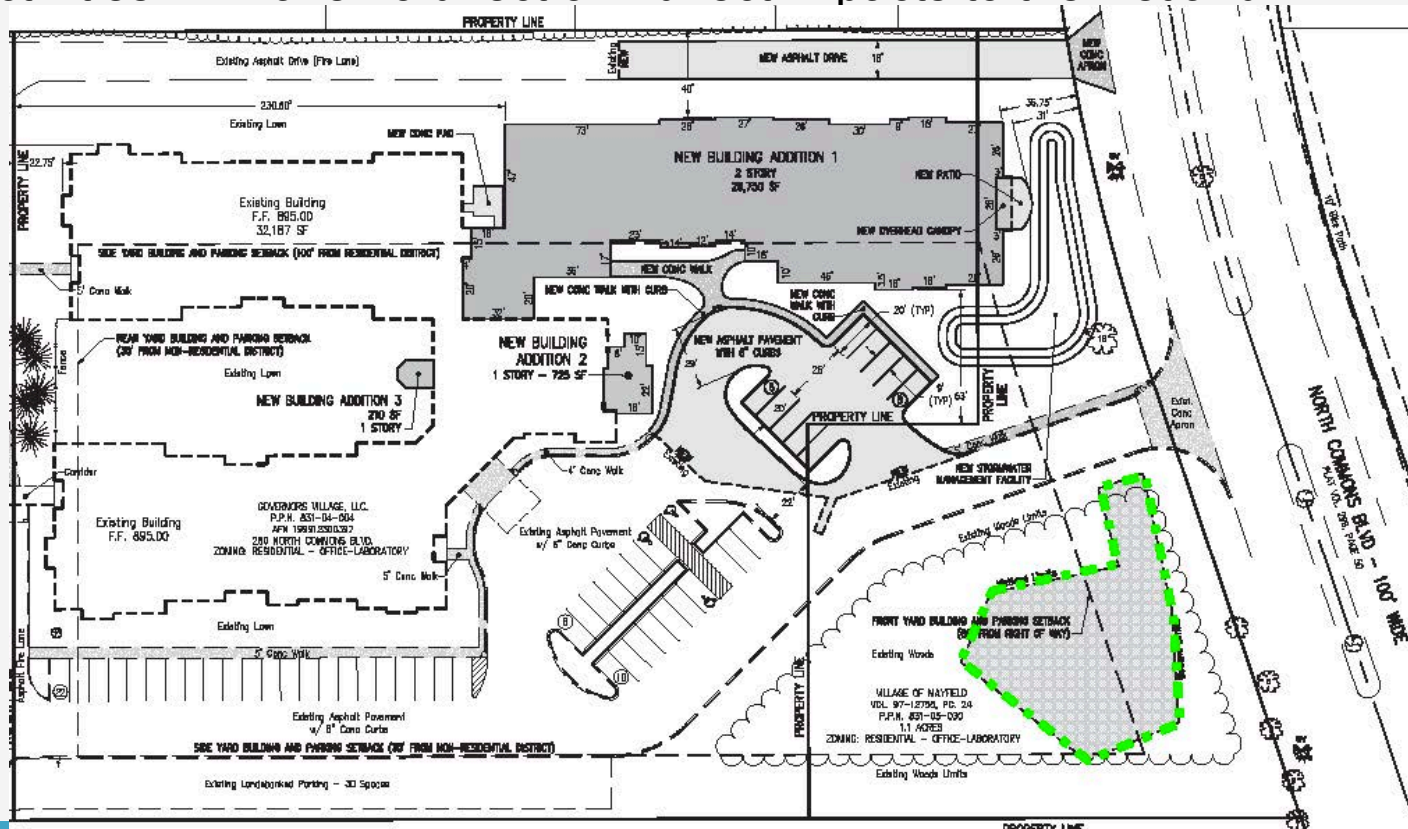
# Avoiding the 8-Step Process – Exemptions under 24 CFR 55.12(c)

24 CFR 55.12(c)(7): An **incidental portion** of the project site is situated in a floodplain and the proposed activities will have no direct or indirect impacts to the floodplain



# Avoiding the 8-Step Process – Exemptions under 24 CFR 55.12(c)

24 CFR 55.12(c)(7): An **incidental portion** of the project site is situated in a wetland and the proposed activities will have no direct or indirect impacts to the wetland



# Avoiding the 8-Step Process – Exemptions under 24 CFR 55.12(c)

**24 CFR 55.12(c)(8):** A non-wetland site in a floodplain for which FEMA has issued final Letter of Map Amendment (LOMA), final Letter of Map Revision (LOMR), or final Letter of Map Revision Based on Fill (LOMR-F) that removed the entire property from a FEMA-designated floodplain location

DETERMINATION								
LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NGVD 29)	LOWEST ADJACENT GRADE ELEVATION (NGVD 29)	LOWEST LOT ELEVATION (NGVD 29)
--	--	Laguna Pointe	911 SW 15th Street	Structure (Building 1)	X (unshaded)	7.0 feet	7.7 feet	--

**Special Flood Hazard Area (SFHA)** - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

DETERMINATION TABLE (CONTINUED)

**PORTIONS REMAIN IN THE SFHA**

STUDY UNDERWAY



# Defining a Successful 8-Step Process

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## HUD Approval

- FEMA approval of CLOMR-F/CLOMA/CLOMR
- US Army Corps of Engineers approval of Jurisdictional Determination and Wetland Permit, as applicable
- State Environmental Department issuance of any additional permits required
- Clearance from all state/federal agencies regarding NEPA Correspondence (SHPO, USFWS, etc.)
- Resolution of all Recognized Environmental Conditions (RECs) identified by the Phase I Environmental Site Assessment (ESA)

## Timing

- Ideal timing is 6-8 weeks after your consultant has been provided the required documentation and information





# Navigating a Successful 8-Step Process

**AVOID PROPERTIES WITH ON-SITE REGULATORY FLOODWAYS AND COASTAL HIGH HAZARD AREAS (ZONE VE)**



# Navigating a Successful 8-Step Process

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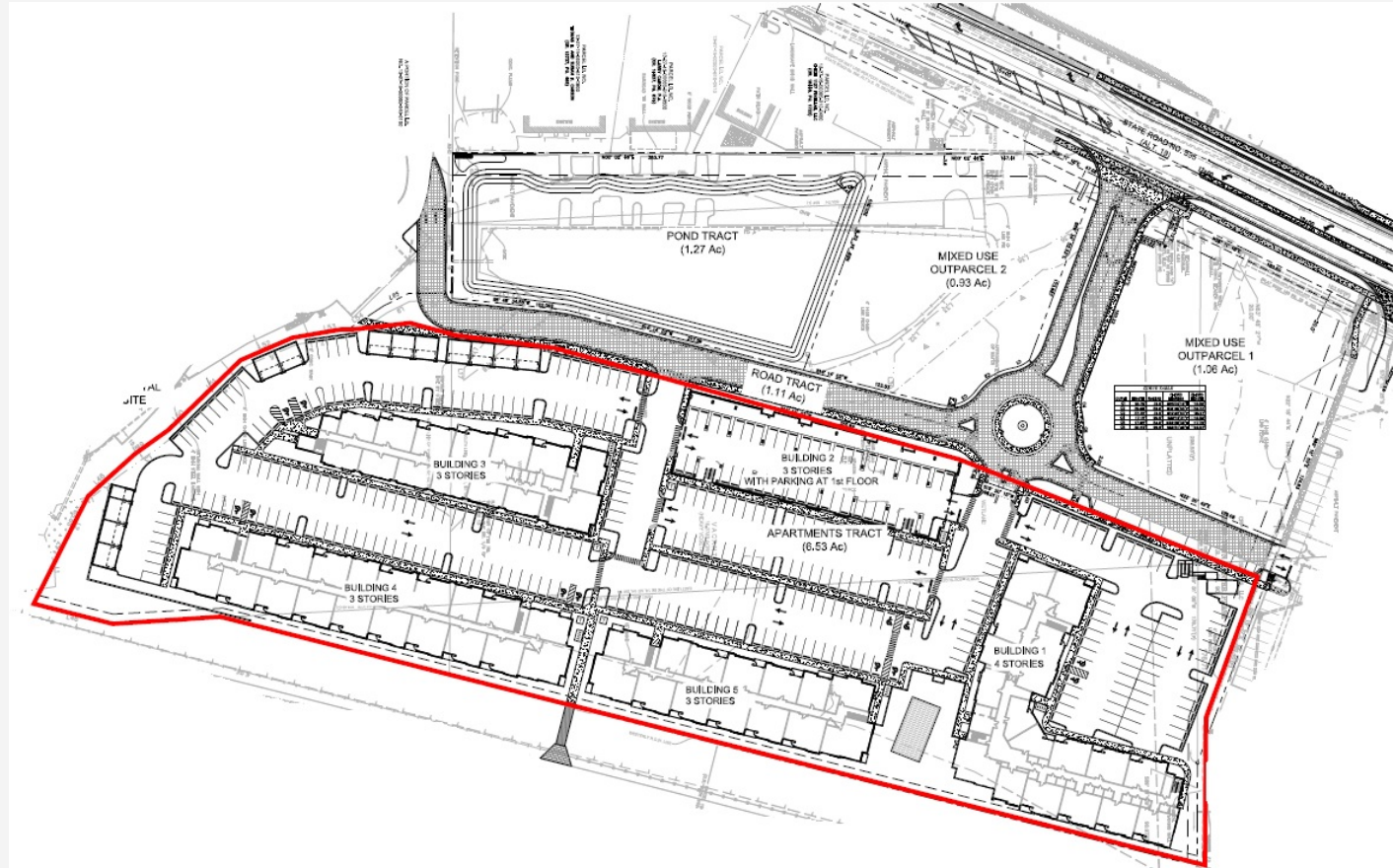
- Properly identify the full project scope and boundaries prior to beginning any of the environmental reporting
- Understand and consider “functional dependence” and “project aggregation” to identify the proper boundaries of the site before beginning environmental reporting

**\*\*If any portion of the HUD collateral is dependent upon construction of roadways, utilities, etc. with another phase of development, these areas must be included in the environmental reporting and the 8-Step**



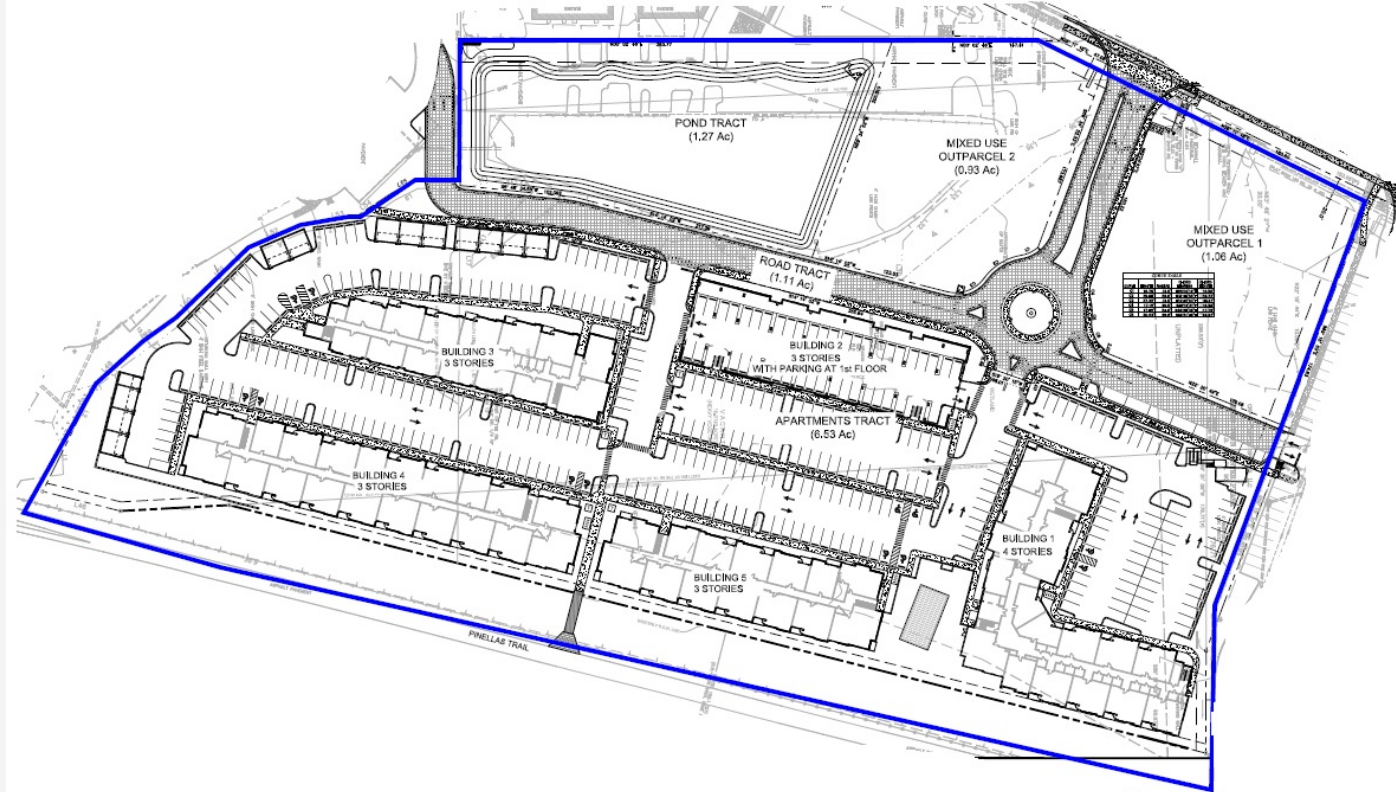
# Navigating a Successful 8-Step Process

## HUD Collateral



# Navigating a Successful 8-Step Process

Limits of  
Environmental  
Reporting for  
Project  
Aggregation  
and Functional  
Dependence



# Navigating a Successful 8-Step Process

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- **Communicate your project timeline to your third-party consultant**
- **Understand when the 8-Step Process should be engaged**

Request a bid for an 8-Step Process from your third-party consultant upon completion of the following milestones:

- ✓ The confirmation of the subject property boundaries
- ✓ The completion of the proposed Site Plan depicting the final site boundaries and the limits of any identified floodplain areas or wetlands
- ✓ At a minimum, a completed draft of the Phase I ESA/ER
- ✓ A wetland delineation (if applicable)
- ✓ The resolution of any recognized environmental conditions (RECs) identified by the Phase I ESA



# Navigating a Successful 8-Step Process

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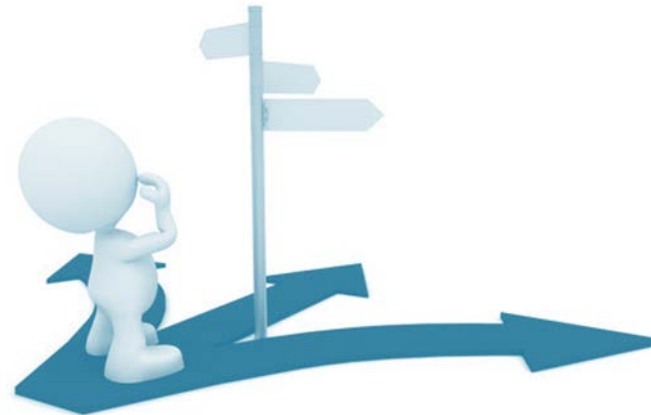
- **Provide all requested documentation and information to the third-party consultant as soon as it is available; be pro-active!**
- **Work cooperatively with LEANThinking and ORCF Staff; communication is key**
- **Facilitate information exchange among the participants in the 8-Step Process:**
  - ✓ Lender
  - ✓ Borrower
  - ✓ Consultant completing the 8-Step Process
  - ✓ HUD
  - ✓ Project Engineer
  - ✓ Wetlands Professional (as applicable)
  - ✓ Property Owner (as applicable)



# Navigating Site Contamination for HUD New Construction Projects

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Panelist: Hannah L. Pearl, EP, CFM; Dominion Due Diligence Group (D3G)



# Recognized Environmental Conditions (RECs)

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Per ASTM E 1527-13, a Recognized Environmental Condition (REC) is the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

Leaking Underground Storage Tanks (LUSTs), State Hazardous Waste Sites (SHWS), Superfund Sites, Brownfields Sites, dry-cleaning facilities, foundries, auto repair facilities, machine shops, etc.





# Identifying Contamination

## ➤ Phase I Environmental Site Assessment (ESA)

- ✓ Review of Environmental Database Records (State and Federal)
- ✓ Review of aerial photographs, Sanborn Fire Insurance Maps
- ✓ Interviews with pertinent property personnel (owner, property manager, maintenance staff, etc.)
- ✓ Site investigation and inspection (observance of potentially detrimental properties in the area, observance of monitoring wells)



# Identifying Contamination

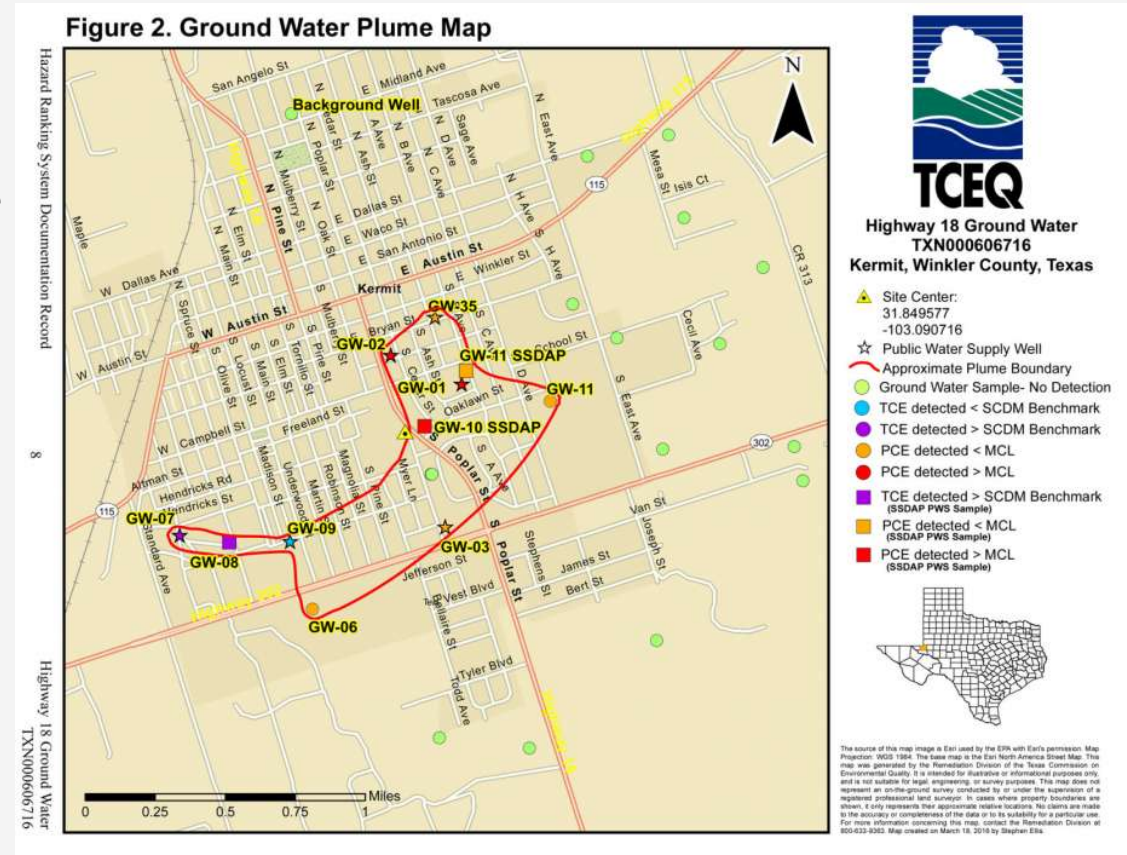
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- **File Review for Database Listings**
- **Phase II Environmental Site Assessment (ESA)**
  - ✓ Soil Sampling
  - ✓ Groundwater Sampling
  - ✓ Indoor Air Sampling
  - ✓ Concludes whether or not a REC exists
  - ✓ Recommends appropriate course of action
- **No Further Action (NFA) Letter from the regulatory authority**



# Addressing Contamination

- Coordinate with applicable regulatory authority (state or federal agency)
- Additional Sampling or Full-Scale Site Characterization and Contaminant Plume Delineation
- Remediation Plan
  - ✓ Engineered “Cap” or Fill
  - ✓ Groundwater Restriction
- No Further Action (NFA) Letter



# New Construction – Remediation During Development

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- **Final NFA Letter cannot be obtained until remediation is complete**
- **What does HUD need to approve the project when the remediation is not complete and an NFA has not been issued?**
  - ✓ **Regulatory authority reviews all site investigation reports and remediation plan**
  - ✓ **May require participation in a Voluntary Cleanup Program or Brownfields Program**
  - ✓ **May require additional engineering or institutional controls**
  - ✓ **Regulatory authority issues a “Comfort Letter” indicating the NFA Letter may be obtained upon completion of remediation in accordance with the approved plan**



# Tips for Success

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- **Address RECs ASAP**
- **Engage a reputable consultant to complete investigations and develop the Remedial Action Plan**
- **Communicate with HUD regarding the timing of resolving RECs**



# Navigating the Presence of an Aboveground Storage Tank (AST)

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Panelist: Hannah L. Pearl, EP, CFM; Dominion Due Diligence Group (D3G)

# ASTs and HUD LEAN Projects



# HUD LEAN Regulations

## (Section 232 Handbook Chapter 7.5.G)

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- New construction projects, rehabilitation projects where residential density is increased, projects where there is a conversion from non-residential to residential use, or projects where a vacant building is made habitable:
  - ✓ ASTs with explosive or flammable material contents must comply with the Acceptable Separation Distance (ASD) standards at 24 CFR Part 51 Subpart C in accordance with the HUD guidebook: “Siting of HUD-Assisted Projects Near Hazardous Facilities” (Form HUD-1060-CPD)
  - ✓ If a plan is agreed upon with HUD before the issuance of a Firm Commitment, these hazards may be mitigated during the construction period, if the work can be done on the subject property. In cases where off-site mitigation is required, the remediation must be completed prior to initial closing.

**HUD will not insure a property where structures and residents will be exposed to unacceptable risks posed by proximity to explosive or flammable hazards.**





# HUD LEAN Regulations

## (Section 232 Handbook Chapter 7.5.G)

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- Existing projects to be refinanced or purchased with no increase in residential density:
  - ✓ HUD will substantively evaluate the risks associated with proximity to hazardous facilities. HUD reviews of existing projects will consider the potential danger presented by existing and proposed liquid fuel ASTs (>100 gallons) and pressurized gas ASTs (stationary tanks of any size), and may require mitigation.
  - ✓ Conformance letter from the governing Fire Department/District is required. The letter must specifically address the safety of the AST(s).
  - ✓ In cases where safety letters cannot be obtained for existing ASTs, where new ASTs are being added, or where off-site tanks are in close proximity to the existing subject building, an acceptable separation distance (ASD) calculation must be included in the application, and mitigation may be required.



# Acceptable Separation Distance (ASD) Calculations

## ➤ ASD Calculator Tool

<https://www.hudexchange.info/environmental-review/asd-calculator/>

### Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Is the container under pressure?	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Does the container hold a cryogenic liquified gas?	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Is the container diked?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
What is the volume (gal) of the container?	<input type="text" value="300"/>
What is the Diked Area Length (ft)?	<input type="text"/>
What is the Diked Area Width (ft)?	<input type="text"/>
<input type="button" value="Calculate Acceptable Separation Distance"/>	
Diked Area (sqft)	<input type="text"/>
ASD for Blast Over Pressure (ASDBOP)	<input type="text" value="147.11"/>
ASD for Thermal Radiation for People (ASDPPU)	<input type="text" value="167.48"/>
ASD for Thermal Radiation for Buildings (ASDBPU)	<input type="text" value="28.82"/>
ASD for Thermal Radiation for People (ASDPNPD)	<input type="text"/>
ASD for Thermal Radiation for Buildings (ASDBNPD)	<input type="text"/>

### ✓ Thermal Radiation for People (unprotected outdoor areas of congregation)

- Playgrounds
- Parks
- Yards
- School grounds
- Open space ancillary to residential structures
- Vehicle parking areas

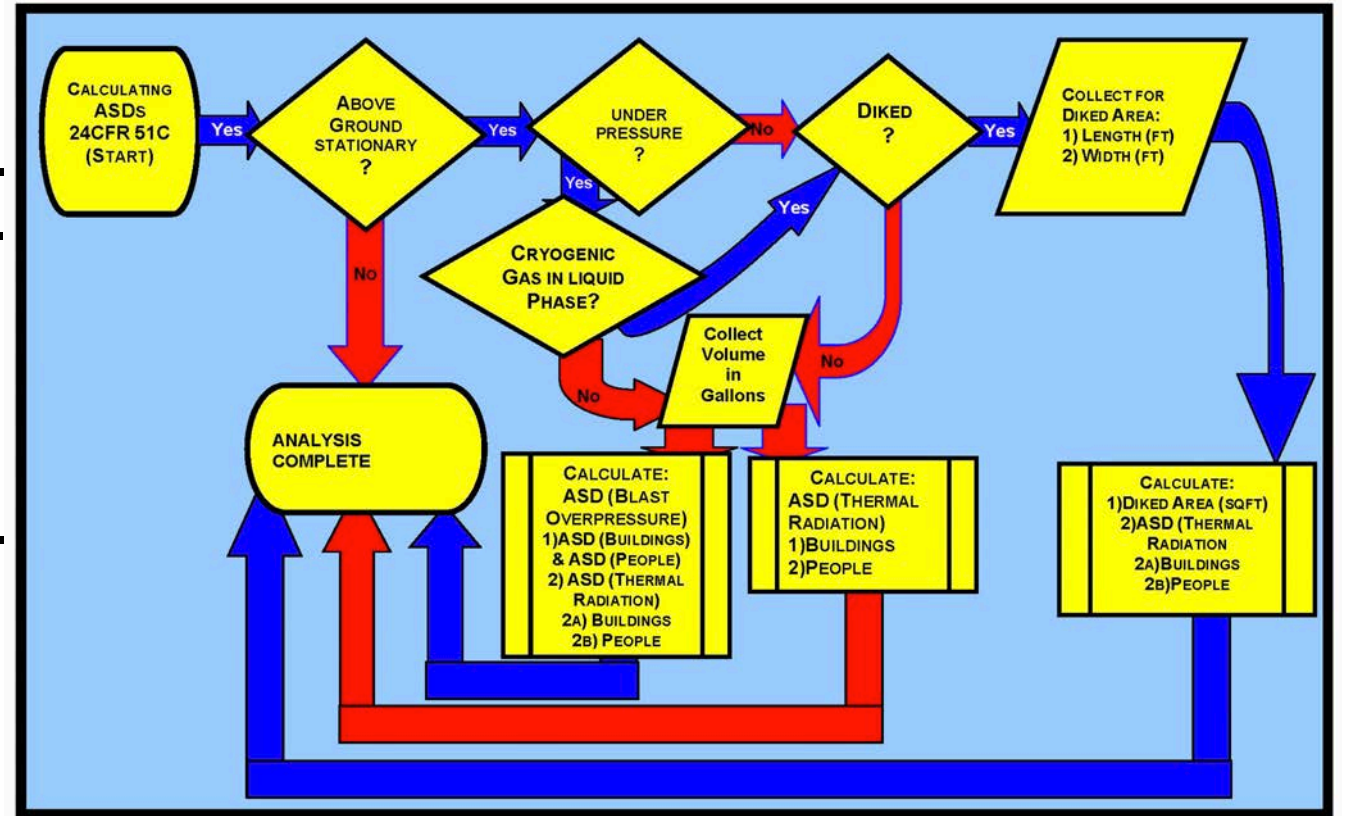
### ✓ Thermal Radiation for Buildings

### ✓ Blast Over Pressure (Pressurized Gas ASTs only)



# Acceptable Separation Distance (ASD) Guidance and Resources

- **ASD User Guide:**  
<https://www.hudexchange.info/resources/documents/Acceptable-Separation-Distance-Assessment-Tool-User-Guide.pdf>
- **ASD Flowchart:**  
<https://www.hudexchange.info/resources/documents/Acceptable-Separation-Distance-Flowchart.pdf>



# AST Mitigation

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- Incorporate a natural or existing barrier
- Bury the hazard
- Reconfigure the site plan to increase the distance between the hazard and the project
- Modify the building design to compensate for the ASD
- Construct a barrier for blast overpressure and thermal radiation, which should comply with HUD's Barrier Design Guidance. Barriers must be designed by a licensed engineer, who is also responsible for overseeing its construction

**Contact HUD to discuss your course of action**



# AST Compliance Documentation

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- A clear site map detailing all on-site and vicinity ASTs
- Site photographs detailing the evaluated ASTs
- Completed ASD calculations for each on-site or vicinity AST
- Supporting maps depicting the calculated ASD radii in relation to the proposed or existing structures
- Safety conformance letter from the governing regulatory authority (purchase/refinance only for on-site ASTs)
- Records pertaining to planned on-site/vicinity ASTs



# AST Compliance Pitfalls/Challenges

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- Lack of clear documentation to support the findings and conclusions
  - ✓ No site maps detailing the ASD radii in relation to the property/structures
  - ✓ Inability to obtain a safety conformance letter from the governing regulatory authority, forcing completion of ASD calculations
  - ✓ No consideration of planned/permitted ASTs
- Identifying and applying the appropriate mitigation strategy
  - Very difficult to work with adjoining property owners' ASTs since they may have no vested interest in the HUD development
  - Not involving HUD to confirm and approve the mitigation strategy
  - Inexperienced engineers with respect to HUD regulations, particularly HUD's Barrier Design Guidance



# Additional Guidance and Resources

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- 24 CFR Part 51 Subpart C  
<https://www.gpo.gov/fdsys/pkg/CFR-2012-title24-vol1/pdf/CFR-2012-title24-vol1-part51-subpartC.pdf>
- HUD Exchange  
<https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities/>
- HUD's Web-Based Instructional System for Environmental Reviews (WISER), specifically "Explosive and Flammable Materials"  
<https://www.hudexchange.info/trainings/wiser/>
- HUD's Barrier Design Guide  
[https://www.hud.gov/sites/documents/BARRIER\\_DESIGN\\_GUIDANCE.PDF](https://www.hud.gov/sites/documents/BARRIER_DESIGN_GUIDANCE.PDF)
- Section 232 Program Website  
[https://www.hud.gov/federal\\_housing\\_administration/healthcare\\_facilities/residential\\_care](https://www.hud.gov/federal_housing_administration/healthcare_facilities/residential_care)
- ORCF Environmental Resource Page  
[https://www.hud.gov/federal\\_housing\\_administration/healthcare\\_facilities/residential\\_care/environmental\\_resources](https://www.hud.gov/federal_housing_administration/healthcare_facilities/residential_care/environmental_resources)

